

CYBERL@B: TECHNOLOGY ENRICHED ENGLISH LANGUAGE LEARNING IN COSTA RICA

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ABSTRACT

This paper covers design, development and evaluation of a site of technology resources called CyberL@b and the affiliated English language learning instruction for 7-9th grades at six high schools in diverse urban and rural settings in Costa Rica. CyberL@b uses interactive media resources designed to engage student learning within authentic contexts. The project is designed to create an environment that is unique in fostering the integration of the four language skills (listening, speaking, reading, and writing) through social interactions that are critical in language learning. An initial needs analysis of the schools indicated that students considered the following to be important contributors to language learning: conversations with tourists, computer programs and video games, movies, and email of class notes. The initial implementation of CyberL@b indicates that when students engage in authentic activities relevant to their needs, they become more autonomous and self-directed in their learning. Teachers also adopt more learner-centered methods in their language teaching. On the basis of ongoing development and evaluation, a variety of approaches and technical strategies have been considered to allow students to engage in real-time authentic language learning activities worldwide.

KEY WORDS: digital platform, computer-assisted language learning, web-based language learning, user interface, authenticity, technology-enriched language learning

1. Introduction

We recently developed a site of technology resources for the teaching of English as a Foreign Language (EFL) associated with the English language learning curriculum for 7th, 8th and 9th grades in Costa Rica called CyberL@b. This curriculum is currently being piloted at six high schools in diverse locations across Costa Rica. The CyberL@b project employs interactive media resources that are designed to engage students in learning within authentic contexts that are relevant to the students' lives. Our discussion examines the learning contexts and changing roles of both teachers and students when using

the CyberL@b resources and curriculum. We discuss initial needs analysis and qualitative findings from the participating pilot schools.

Technology can serve as a powerful resource for guiding constructive learning activities to advance English as a Foreign Language Learning (EFL) in secondary schools, especially if it is based on the national curriculum of the Ministry of Education. CyberL@b fulfills this necessity by adopting a Computer-Assisted Language Learning (CALL) approach that is guided by the need to enhance authentic social interaction among Costa Rican students as a critical component of the EFL learning environment.

The CyberL@b design seeks to provide a user interface that becomes transparent to learning (Shneiderman, 1998) [1] with a consistent look and feel that uses standardized naming schemes, graphics, orientation, navigation and other user interface elements. The use of grade appropriate language for functional elements is especially critical in EFL online resources. Terms must be clearly defined, highlighted, punctuated and used consistently. The Internet and related technologies are evolving rapidly worldwide and it is becoming more critical to adhere to international standards including relevant tagging procedures established by the World Wide Web Consortium (W3C), Advanced Distributed Learning Group (ADL SCORM), IEEE Learning Technology Group and CAST's Bobby guidelines for accessibility (Aust & Isaacson, 2005) [2]. CyberL@b is designed to personalize the interface for different categories of learners. For example, a simple implementation of personalized design is to employ different colored platforms for each grade level and the six-sequenced cross-curricular topic-based components that integrate authentic content with the four basic skills in English (Log On, Turn It Up, System Tools, Scan It, Type it Up, and Log Off).

2. Features of Web-based CALL

Computer-Assisted Language Learning (CALL) is an approach to language teaching and learning in which computer technology is used as an aid to the presentation, reinforcement and assessment of language learning on an interactive basis (Egbert and Hanson-Smith) [3]. Integrative CALL heightens the development of two technological features in language learning: multimedia computers and the Internet. The issue that promotes

CALL environments is the need to incorporate a globalized learner into society; one that is able to communicate across languages and cultures. Web-based CALL meets language learning objectives and exploits second language learners' potential by leading them to "learning by doing" in authentic English language learning contexts.

Since the emergence of the Communicative Approach, the need to meet authentic and meaningful EFL settings has increased. Likewise, bringing to class artificially contextualized environments has decreased. In search for this authenticity, Web-based learning has gained popularity and is exploited as a medium for student-centered, task-based and collaborative learning.

As developers of Learning Generations (Aust, et.al., 2005) [4] and other technology-enriched approaches to learning like those proposed by Duhaney (2001) [5], these scholars have noted that the advent of the Internet and new digital technologies are rapidly changing the role of the teacher and the nature of learning. The classroom teacher is no longer viewed as the repository of knowledge but as a facilitator who guides students to relevant digital information resources. Current generation teachers serve to assist students in organizing learning activities where students construct understandings around authentic and meaningful collaborative experiences. Jackson (2006) [6] highlighted three different learning contexts that occur when students begin interacting with current learning technologies including: Self-study (asynchronous directed study), instructor-led events (synchronous "live, real-time" learning), and small group collaboration.

Self-study modes implement learning strategies such as contextual background, factual knowledge, course readings, skills practice, homework, and hands-on activities that allow learners to reach levels of application and assessment. Instructor-led learning generally occur in real-time with highly interactive and structurally dynamically characteristics led by the instructor and with the participation of other classmates on-line. Small group collaboration embraces "learning methods dependent on learner-learner interaction rather than learner-content interaction, and includes models such as constructivism, action learning, conversational learning" (Jackson, 2006, p. 4) [7].

Indeed Web-based Computer-Assisted Language Learning calls for a shifting role of traditional classroom hierarchy to a more balanced relationship between teachers and their students (Killian, 1994, cited in Qiming, 2002) [8]. Web-based CALL requires self-study (for autonomous learning), teacher-led instruction (for organization, monitoring, administering), and small-group discussions (for interactivity). It allows learners to control selection, sequencing and the pace of learning, thus learners' accommodation of individual differences and use of learning strategies.

These learning contexts and these teacher and student roles are met in a digital platform designed by three professors from the School of Modern Languages from

the University of Costa Rica. Its framework and components are explained below.

3. CyberL@b and Web-based CALL

CyberL@b is a digital platform that incorporates Web-based learning as a means for facilitating the practice of English as a foreign language. This integrated cross-curriculum topic-based program allows on-line users to grow in the English language by immersing learners into the topics found in the National English Curriculum of the Ministry of Education with controlled, semi-controlled and communicative tasks. As students work with CyberL@b, they are led towards critical thinking, problem-solving experiences, and hands-on projects, providing authenticity and meaningfulness to learning English. The uniqueness of its components describes its capabilities. (See appendix 1)

3.1 Description of the components of each unit

CyberL@b consists of six teaching components dealing with the integration of the four macro skills (listening, speaking, reading and writing) and micro language skills (grammar, pronunciation, culture and vocabulary). These are described below:

3.1.1 Log on (Schema Activation)

Log On is the opening to each of the units. It is divided into four sections: goals, vocabulary, warm-up and your turn.

- In each unit the "goals" are specified from the beginning so that EFL learners are aware of the objectives they have to accomplish in the language and the content.
- The "vocabulary" section allows them to match their prior knowledge of the topics with the new vocabulary they will meet in the units with an activity.
- The "warm-up" section reinforces the vocabulary they have already practiced with a supplementary task.
- In "your turn", students are able to relate the topic to their daily life experiences.

3.1.2 Turn it Up (Listening)

Turn It Up deals with the listening skill. It is composed of three parts: pre-listening, while listening and post-listening.

- Pre-listening prepares students to listening, involving them in several learning strategies. Students are engaged both in top-down and bottom-up strategies.
- While-listening involves listening to content in order to get a global understanding of the information provided to promote proficiency in listening skills.
- Post-listening relates the information they have previously listened to their everyday life by working in pair or group work activities. Students are engaged in interviews, surveys, question-and-answer tasks, and so on.

3.1.3 System Tools (Grammar)

System Tools integrates structure through easy-to-remember rules of thumb which provide a solid starting point towards accuracy and show how grammar really works in context. On-line learners will experience grammar in simple rules, *rules needed for effective communication*. System tools simplifies the grammar for learners and learners “grow their grammar” with practices and activities as they work on the different units.

3.1.4 Scan It (Reading)

Scan It develops learners’ reading skills. It is divided into pre-reading, while-reading and post-reading through the top-down processing to reading.

- The pre-reading stage is an “engaging” stage where the students’ interest is aroused, and a connection to their prior knowledge of the topic is triggered.
- In the while-reading stage, students gain deeper insights on reading skills through skimming, scanning, think-aloud, inferring, visualizing, restating, re-reading, drawing conclusions, among others.
- The post-reading stage relates the reading to the students’ real-life experiences by making connections to their daily life activities.

3.1.5 Type it Up (Writing)

Type It Up involves three stages: pre-writing, while-writing, and post-writing.

- In the “Prewriting” stage, learners are involved in a series of different methods to generate ideas for their written texts, like for example, brainstorming, listing, clustering, sketching, peer discussion, questioning, outlining, free-writing, reading, opinion charts, graphic organizers, and so on.
- Throughout the “while-writing” stage, learners activate their writing skills through planning, using structures to organize writing, drafting, and putting ideas down.
- The “post-writing” stage includes strategies such as polishing for final draft, sharing for portfolio assessment, assessing and evaluating both process and product.

3.1.6 Log Off (Review of Unit)

Log Off integrates listening, speaking, reading and writing skills by linking the topic of the unit to a real-life situation through cooperative learning. Log Off comprises three stages: team project, searching the web and self-assessment.

- The team project establishes a bond between the topic of the unit and a situation encountered in the learners’ everyday life.
- In Searching the Web learners have the opportunity to search and work through several web links and engage in listening, speaking, reading and writing activities. This stage serves as an integration of the skills and strategies they have accomplished throughout the unit.

- Finally, Self-Assessment helps learners reflect on what they have accomplished throughout the unit by identifying their areas of success in using the communicative skills such as listening, speaking, reading and writing.

3.2 Notes and Pair Work Activities

Notes and Pair Work Activities are supplementary practices at the end of each of the units. It includes short readings on culture snaps about the topics discussed in the unit, involving students in interactive activities. This section is also composed of a pair-work activity or information-gap activity that allows learners to practice collaborative interactive skills

3.3 Review Units

Review Units are unit-specific, student-directed activities that comprise skills and structure of every three units. Each grade (7th, 8th, and 9th) has three review units. These review units include exercises with interesting tasks that are authentic, creative, and interactive. The interconnection of the four skills is exploited in the review units.

As a whole, CyberL@b includes receptive, active and interactive hands-on activities. Receptive activities allow foreign language learners to gather information from a series of sources: face-to-face surveys and interviews, readings, vocabulary-building exercises, project-based observations of the community, personal experiences, internet sources, and listening activities, among others. (see Appendix 1)

Active practices promote authenticity by encouraging learners to address an authentic audience in the production of short writings, comments on observations, exchange of information from interviews, simulations of daily activities, answering on-line quizzes, completion of questionnaires, etc.

Last, but not least, in interactive activities, learners are both receiving and sending information in task-based and project-based activities that require collaboration and team work. Interaction allows learners to use the English language in meaningful contexts, promoting a sense of ownership and strategic investment as they experience their progress in the language. At this stage, learners using CyberL@b can become risk-takers with added motivation and self-confidence.

In sum, the novelty of CyberL@b is that this digital platform tries to picture the reality of the Costa Rican English Language Curriculum as well as its culture and its people, taking into account the needs and interests of Costa Rican students who are learning English.

As part of the creation of CyberL@b, a needs analysis study was carried out in the six Costa Rican high schools participating in the piloted research.

4. Needs Analysis of Costa Rican High School Students

4.1 Method

This is a qualitative study that describes the needs and interests of students regarding the importance of the

four skills (listening, speaking, reading, and writing) for the acquisition of English as a Foreign Language.

4.1.1. Subjects: The participants of the study were 416 students enrolled in seventh, eighth and ninth grades from six Costa Rican high schools. Three of these high schools were from rural areas (Pejivaye, Sinai and Florencia), and three from urban areas (Palmares, Cot, and Liceo del Este). (See table 1)

Table 1
Number of Students who participated in the Qualitative Study on the Importance of Four skills in Learning English as a Foreign Language

High Schools	Levels/ grades		
	Seventh	Eighth	Ninth
Pejivaye.....	13	20	23
Sinai	28	16	14
Florencia.....	27	48	21
Palmares	31	30	38
Cot	13	17	23
Liceo del Este	18	18	18

Description of the Instrument

The instrument was divided into five sections. The first four sections asked the subjects to rate the importance of the different resources used for learning listening, speaking, reading and writing of English as a Foreign Language (whether the resources were important or not for practicing English).

In regards to listening, they believe that teacher's instructions, the teacher him/herself, native speakers of English, and movies are the most important resources. For these subjects, class notes, electronic mails, tests and homework are very useful for writing skills. In regards to speaking, having conversations with tourists, with friends, with classmates, with the teacher, and having oral presentations in class are the most important resources.

4.2 Needs Analysis Results

According to the students of rural high schools, (Florencia, Sinai, and Pejivaye) the Internet, computer programs, textbooks and dictionaries are the resources that help the most in practicing the reading skill. class notes, talking to tourists, native speakers, and the teacher. (See Table 2)

In general, these subjects agreed that the most important resources for practicing listening, speaking, reading and writing are computer programs, video games, reading Internet web pages, listening to the teacher, listening to movies, tests,

In regards to the skills, these high schools agreed that the most important skill is speaking.

Table 2
Important Resources that Facilitate Listening, Speaking, Reading and Writing according to Rural High Schools in Costa Rica

Resources	Highest Scores
Read computer programs and video games	61.32 %
Read web-pages	60.79 %
Listen to the English teacher.....	65.59 %
Listen to movies recorded in English	63.13 %
Write in tests.....	57.02 %
Write class notes	53.69 %
Conversations with the English teacher.....	57.83 %
Conversations with tourists	53.81 %

Similarly, the students of urban high schools, (Palmares, Liceo del Este and Cot 8) answered that the most important resources for reading skills are the Internet web pages, computer programs and video games, and electronic mails; in regards to listening, they believed that movies, TV cable, and the teacher are the most important resources. For these students, electronic mail, class notes, and tests are the most important resources for writing skills. In regards to speaking, having conversations in class, with tourists, with friends, with the teacher, and delivering oral presentations in class are the most important resources.

For the students of the urban high schools, the most useful resources for speaking are conversations with

friends, conversations with tourists, and oral presentations; for the writing skill: electronic mail and class notes; for the listening skill: movies, TV Cable and the teacher; for the reading skill: computer programs and video games and Internet web pages. (See Table 3)

As rural high school students, urban ones chose the speaking skill as the most important one for getting a job, talking to tourists, studying abroad, and for communicating with people from other countries and culture.

Both rural and urban students agreed that that the most important resources for practicing and learning English are conversations with tourists, computer programs, movies and class notes. (See Table 4)

Table 3
Important Resources that Facilitate Listening, Speaking, Reading and Writing according to the Urban High Schools in Costa Rica

Resources	Highest Scores
Conversations with friends.....	76.94 %
Conversations with tourists	55.88 %
Oral presentations.....	50.00 %
Electronic mail	69.32 %
Class notes.....	54.47 %
Movies	68.51 %
TV Cable.....	66.30 %
Computer programs and video games	65.57 %

5. Conclusion

Computer-Assisted Language Learning is a powerful approach with much to offer to the field of English Language Teaching. When students engage in authentic activities that are relevant to their needs, they become more autonomous and self-directed in their learning. This allows teachers to adopt more learner-centered methodology for language teaching. The CyberL@b resources and curriculum offer a variety of self-directed and collaborative activities that lead foreign language learners towards accuracy and fluency in meaningful contexts. Learners are engaged in authentic social contexts and involved in the integration of the four language skills: listening, speaking, reading and writing. As learners immerse themselves in this digital environment they are learning a foreign language in a proactive way that encourages active communication and self-expression in the foreign language. There is less teacher-talk, and more student-talk through web-based CALL, allowing learners more control and ability to personalize their own learning. They are also learning critical competencies and attitudes in the use of technology that will make them more competitive in a global information society.

The CyberL@b resources and curriculum are responsive to emerging trends in teaching in Costa Rica where technology becomes a key element in teaching and learning of a foreign language. Its platform embraces the

following features: interactive digital materials, autonomous learning, different teaching styles, and the integration of grammar-based, skill-based, task-based, project-based, and collaborative-based trends in EFL.

As we continue to refine CyberL@b and conduct research on the needs in the rapidly evolving culture of our schools, we are considering further enhancements to resources and instructional methods. The teacher and students will indeed recognize the importance of authentic learning activities through web-based materials. Added to this, both students and teachers will appreciate the opportunity to interact in English with the help of other resources in meaningful ways and at the same time, value the connection of language and culture in comparable English speaking schools.

For this reason, we are currently investigating the feasibility of a variety approaches and technical strategies for establishing sister cities school in English speaking countries. The schools will be connected on the basis of such factors as common demographic, geographic, culture, economics and employment. This approach will integrate the CyberL@b activities and curriculum with real-time interactive video (such as MS Net Meeting and Video iChat from Apple) allowing the students to interact directly in their sister school.

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Figure 1. Snapshot of Cyberl@b main page



Figure 2. Flow chart of Cyberl@b Structure

